CLAIMS

1. A dosage determination supporting apparatus which supports a determination of a dosage of a medicine, comprising:

a measuring unit operable to measure biological information obtained from one of inside and surface of a user's body;

a dosage calculating unit operable to calculate a dosage on the basis of the biological information; and

a notifying unit operable to notify the user of the dosage calculated by the dosage calculating unit.

2. The dosage determination supporting apparatus according to Claim 1,

wherein the dosage calculating unit includes:

a correspondence memory operable to memorize a correspondence between the biological information and the dosage; and

a calculating unit operable to calculate the dosage corresponding to the biological information, with reference to the correspondence.

3. The dosage determination supporting apparatus according to Claim 2, further comprising:

a communication controlling unit, which is connected to an external terminal via a network, operable to control a communication with the external terminal; and

a correspondence rewriting unit operable to receive an external input via the communication controlling unit and to rewrite contents of the correspondence stored in the correspondence memory on the basis of the external input.

4. The dosage determination supporting apparatus according to Claim 3, further comprising

an external input authenticating unit operable to authenticate a person who inputs the external input,

wherein the correspondence rewriting unit rewrites the contents of the correspondence stored in the correspondence memory on the basis of the external input only when the person is approved.

5. The dosage determination supporting apparatus according to Claim 4,

wherein the external input authenticating unit performs an authentication on the basis of a physical characteristic of the person.

6. The dosage determination supporting apparatus according to Claim 2, further comprising:

a data inputting unit operable to receive an input of data from the user; and

a correspondence rewriting unit operable to receive an external input via the data inputting unit and to rewrite contents of the correspondence stored in the correspondence memory on the basis of the external input.

7. The dosage determination supporting apparatus according to Claim 1, further comprising:

a dosage memory operable to memorize the dosage; and

a dosage storing unit operable to store the calculated dosage together with a calculation time of day into the dosage memory.

8. The dosage determination supporting apparatus according to Claim 1, further comprising:

a biological information memory operable to memorize the

biological information; and

a biological information storing unit operable to store the biological information measured by the measuring unit together with a measurement time of day into the biological information memory.

9. The dosage determination supporting apparatus according to Claim 1, further comprising:

a physical condition measuring unit operable to measure a physical condition of the user;

a physical condition memory operable to memorize the physical condition of the user; and

a physical condition storing unit operable to store the physical condition of the user together with a measurement time of day into the physical condition memory.

10. The dosage determination supporting apparatus according to Claim 1, further comprising:

a dosage memory operable to memorize the dosage;

a dosage storing unit operable to store the calculated dosage together with a calculation time of day into the dosage memory; and

a communication controlling unit, which is connected to an external terminal via a network, operable to output the dosage and the calculation time of day stored in the dosage memory to the external terminal via the network.

11. The dosage determination supporting apparatus according to Claim 1, further comprising:

a biological information memory operable to memorize the biological information;

a biological information storing unit operable to store the

biological information measured by the measuring unit together with a measurement time of day into the biological information memory; and

a communication controlling unit, which is connected to an external terminal via a network, operable to output the biological information and the measurement time of day stored in the biological information memory to the external terminal via the network.

12. The dosage determination supporting apparatus according to Claim 1, further comprising:

a physical condition measuring unit operable to measure a physical condition of the user;

a physical condition memory operable to memorize a physical condition of the user;

a physical condition storing unit operable to store the physical condition of the user together with a measurement time of day into the physical condition memory; and

a communication controlling unit, which is connected to an external terminal via a network, operable to output the physical condition of the user and the measurement time of day stored in the physical condition memory to the external terminal via the network.

13. A syringe which is capable of setting a dosage automatically, comprising:

a measuring unit operable to measure biological information obtained from one of inside or surface of a user's body;

a dosage calculating unit operable to calculate a dosage on the basis of the biological information; and

an injecting unit operable to inject the dosage of a medicine calculated by the dosage calculating unit.

14. The syringe according to Claim 13,

wherein the dosage calculating unit includes:

a correspondence memory operable to memorize a correspondence between the biological information and the dosage; and

a calculating unit operable to calculate the dosage corresponding to the biological information, with reference to the correspondence.

15. The syringe according to Claim 14,

wherein the injecting unit includes:

an injection needle;

a medicine containing unit operable to contain the medicine;

a piston operable to discharge the medicine contained in the medicine containing unit into the injection needle;

a setting unit operable to set an amount of the medicine to be discharged by the piston; and

an adjusting unit operable to adjust the amount of the medicine to be discharged that is set by the setting unit so that the dosage of the medicine calculated by the calculating unit may be administered.

16. The syringe according to Claim 15 further comprising

a notifying unit operable to notify the user of the dosage calculated by the calculating unit.

17. The syringe according to Claim 16 further comprising

a user verification unit operable to have the user verify the dosage calculated by the calculating unit and to stop a discharge of the medicine when a verification is not obtained from the user.

18. The syringe according to Claim 15 further comprising

a correcting unit operable to correct the amount of the medicine to be discharged that is set by the setting unit.

19. The syringe according to Claim 18, further comprising:

a dosage storing memory operable to memorize the dosage; and

a dosage storing unit operable to store the dosage of the medicine having been administered to the user through the injecting unit together with an administration time of day into the dosage storing memory.

20. The syringe according to Claim 15, further comprising:

a dosage tolerance limits memory operable to memorize tolerance limits of the dosage; and

a discharged amount checking unit operable to check whether the amount of the medicine to be discharged is within the tolerance limits.

21. The syringe according to Claim 20 further comprising

a warning unit operable to warn the user when the amount of the medicine to be discharged is judged to be beyond the tolerance limits.

22. The syringe according to Claim 15, further comprising:

a dosage storing memory operable to memorize the dosage;

a dosage storing unit operable to store the dosage of the medicine having been administered to the user through the injecting unit together with an administration time of day into the dosage storing memory; and

a communication controlling unit, which is connected to an external terminal via a network, operable to output the dosage and the calculation time of day stored in the dosage storing memory to

the external terminal via the network.

23. The syringe according to Claim 14, further comprising:

a communication controlling unit, which is connected to an external terminal via a network, operable to communicate with the external terminal; and

a correspondence rewriting unit operable to receive an external input via the communication controlling unit and to rewrite contents of the correspondence stored in the correspondence memory on the basis of the external input.

24. The syringe according to Claim 14, further comprising:

a data inputting unit operable to receive an input of data from the user; and

a correspondence rewriting unit operable to receive an external input via the data inputting unit and to rewrite contents of the correspondence stored in the correspondence memory on the basis of the external input.

25. The syringe according to Claim 13, further comprising:

a biological information memory operable to memorize the biological information; and

a biological information storing unit operable to store the biological information measured by the measuring unit together with a measurement time of day into the biological information memory.

26. The syringe according to Claim 13, further comprising:

a biological information memory operable to memorize the biological information;

a biological information storing unit operable to store the biological information measured by the measuring unit together

with a measurement time of day into the biological information memory; and

a communication controlling unit, which is connected to an external terminal via a network, operable to output the biological information and the measurement time of day stored in the biological information memory to the external terminal via the network.

27. A health-care supporting system which supports a health care of a user, comprising:

a dosage determination supporting apparatus operable to support a determination of a dosage to be administered to the user, with reference to a correspondence between biological information obtained from one of inside or surface of the user's body and the dosage of a medicine; and

a server apparatus, which is connected to the dosage determination supporting apparatus via a network, operable to send the correspondence to the dosage determination supporting apparatus,

wherein the dosage determination supporting apparatus includes:

a measuring unit operable to measure the biological information of the user;

a correspondence memory operable to memorize the correspondence;

a calculating unit operable to calculate the dosage corresponding to the biological information, with reference to the correspondence;

a notifying unit operable to notify the user of the dosage calculated by the calculating unit; and

a correspondence rewriting unit operable to rewrite the correspondence that is received from the server apparatus and

stored in the correspondence memory.

28. A server apparatus which is connected, via a network, to a dosage determination supporting apparatus that supports a determination of a dosage of a medicine to be administered to a user, and which sends/receives various kinds of data to/from the dosage determination supporting apparatus, comprising:

a correspondence memory operable to memorize a correspondence between biological information obtained from one of inside and surface of the user's body and the dosage;

a unit operable to receive the biological information from the dosage determination supporting apparatus;

a calculating unit operable to calculate the dosage corresponding to the received biological information, with reference to the correspondence memory; and

a unit operable to send the dosage calculated by the calculating unit to the dosage determination supporting apparatus.

29. A server apparatus which is connected, via a network, to a dosage determination supporting apparatus that supports a determination of a dosage of a medicine to be administered to a user, and which sends/receives various kinds of data to/from the dosage determination supporting apparatus, comprising:

a correspondence memory operable to memorize a correspondence between biological information obtained from one of inside and surface of a user's body and the dosage;

a unit operable to receive the biological information and the dosage from the dosage determination supporting apparatus;

a judging unit operable to judge, with reference to the correspondence memory, whether the dosage corresponding to the received biological information can be authenticated; and

a unit operable to send a judgment result given by the

judging unit to the dosage determination supporting apparatus.

30. A method for historical-data communication according to a public key cryptosystem for a health-care supporting system which comprises a terminal apparatus used by a user and a server apparatus connected to the terminal apparatus and used by a health manager, comprising:

a step in which the terminal apparatus affixes a signature to the historical data regarding a health condition of the user, using a private key of the user;

a step in which the terminal apparatus sends the historical data having the affixed signature to the server apparatus;

a step in which the server apparatus receives the historical data having the affixed signature; and

a step in which the server apparatus verifies the signature affixed to the historical data, using a registered public key of the user.

31. A method for correspondence communication according to a public key cryptosystem for a health-care supporting system which comprises a dosage determination supporting apparatus used by a user and a server apparatus connected to the dosage determination supporting apparatus and used by a health manager,

wherein the correspondence shows a correspondence between biological information obtained from one of inside or surface of the user's body and a dosage, and

the dosage determination supporting apparatus obtains the dosage from the biological information, with reference to the correspondence,

the method comprising:

a step in which the server apparatus affixes a signature to the correspondence using a private key of the health manager;

a step in which the server apparatus sends the correspondence having the affixed signature to the dosage determination supporting apparatus; and

a step in which the dosage determination supporting apparatus receives the correspondence having the affixed signature; and

a step in which the dosage determination supporting apparatus verifies the signature affixed to the correspondence, using a registered public key of the health manager.